

REMARKS

Claims 1, 2, 7-16 and 20-29 are pending in the above-identified application. Claims 1, 2, 7-16 and 20-29 were rejected. Applicants maintain that no new matter has been added. Accordingly, claims 1, 2, 7-16 and 20-29 are at issue in the above-identified application.

Objection To Claims

Claim 1 was objected to because of the following informalities: the ranges " $0.9 \leq x \leq 2.0$ " and " $0.01 \leq y \leq 0.50$ " in line 10 contain typographical errors. Applicants have amended claim 1, per the Examiner's request. Withdrawal of this objection is respectfully requested.

35 U.S.C. § 112 Indefiniteness Rejection of Claims

Claims 1, 2, 7-16 and 20-29 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Applicants have amended claim 1, per the Examiner's request. Withdrawal of this rejection is respectfully requested.

35 U.S.C. § 103 Obviousness Rejection of Claims

Claims 1, 2, 8-12, 14, and 28 were rejected under 35 U.S.C. § 103(a) as being unpatentable over WO 99/59214 in view of *Takeuchi et al.* (U.S. Patent No. 6,030,726). Claims 7, 13, 15, 27, and 29 were rejected under 35 U.S.C. § 103(a) as being unpatentable over WO 99/59214 in view of *Takeuchi et al.* (U.S. Patent No. 6,030,726) as applied to claims 1, 2, 8-12, 14, and 28 above, and further in view of *Fujimoto et al.* (U.S. Patent No. 5,683,834). Claims 16 and 20-26 were rejected under 35 U.S.C. § 103(a) as being unpatentable over WO 99/59214 in view of *Yamashita et al.* (U.S. Patent No. 6,255,020) in view of *Fujimoto et al.* Applicants respectfully traverse these rejections.

Claim 1 recites a non-aqueous electrolyte secondary battery comprising a positive electrode, a negative electrode and a non-aqueous electrolyte, wherein the positive electrode contains a manganese-contained complex oxide containing lithium (Li), manganese (Mn), and a first element (Ma) selected from the group consisting of zinc (Zn), cobalt (Co), aluminum (Al), tin (Sn), chromium (Cr), and magnesium (Mg), wherein the chemical formula of the manganese-contained complex oxide is $\text{Li}_x\text{Mn}_{2-y}\text{Ma}_y\text{O}_4$ and wherein x is the range of $0.9 \leq x \leq 2.0$ and y is in the range of $0.01 \leq y \leq 0.50$, both inclusive. Claim 1 further recites A non-aqueous electrolyte secondary battery wherein the positive electrode contains a nickel-contained complex oxide containing lithium (Li), nickel (Ni), and a second element selected from the group consisting of iron (Fe), zinc (Zn), cobalt (Co), aluminum (Al), tin (Sn), chromium (Cr), and magnesium (Mg), wherein the chemical formula of the nickel-contained complex oxide is $\text{LiNi}_{1-z}\text{Ma}_z\text{O}_2$ and wherein z is the range of $0.01 \leq z \leq 0.50$, both inclusive.

The WO 99/59214 reference discloses a positive electrode that contains a complex oxide of manganese lithium and cobalt having a formula of $\text{Li}_2\text{Co}_y\text{Mn}_{2-y}\text{O}_4$ and wherein $0 < y < 0.6$. Under MPEP § 2144.05, Section 3, entitled, "Rebuttal of Prima Vice Case of Obviousness," Applicants can rebut a prima vice case of obviousness based on overlapping ranges by showing the criticality of the claimed range. Furthermore, MPEP § 2144.05 then goes on to state that the law is replete with cases in which the difference between the claimed invention and the prior art is some range or other variable in the claims. In such a situation, the Applicant must show that the particular range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range. Applicants maintain that Applicants' claimed range for "y" does achieve unexpected results as evidenced by Table 1 of Applicants' specification, which shows examples 1-1 through 1-8 which have a "y" variable falling within Applicants claimed

range and the difference between those examples and comparative examples 1-1 and 1-2 which illustrate a “y” variable which falls above or below the claimed range. In the comparative examples, for example, the high load discharge energy after preservation at high temperature is less than the high load discharge energy after preservation at high temperature of the examples within the claimed range. Additionally, Applicants also provide two Declarations, attached hereto, which recite an additional comparative example wherein y is greater than 0.5 and less than 0.6, that is wherein y is equal to 0.55, having a high load discharging energy after preservation at high temperature of 2.9Wh. Therefore, Applicants maintain that there is criticality to the claimed range and it is not obvious in light of the range taught by WO 99/59214.

Furthermore, WO 99/59214 also recites a nickel-contained complex oxide having a formula $\text{LiNi}_x\text{Co}_{1-x}\text{O}_2$ wherein $0 < x < 1$. However, Applicants claim a nickel-contained complex oxide having a formula $\text{LiNi}_{1-z}\text{Ma}_z\text{O}_2$ wherein z is the range of $0.01 \leq z \leq 0.50$. Applicants maintain that this “z” range achieves unexpected results as evidenced by Table 1, which shows examples 1-1 through 1-8, in which the “z” variable falls within Applicants claimed range and comparative examples 1-3 and 1-4 wherein the “z” variable falls outside of Applicants claimed range and within the range claimed by WO 99/59214. Examples 1-1 through 1-8 have a higher load discharge energy after preservation at high temperature than comparative examples 1-3 and 1-4. Therefore, Applicants maintain that this range as well as the previous range, has criticality in light of the data shown in Table 1.

Accordingly, Applicants submit that the claimed invention is not either anticipated by nor obvious over the applied references, either alone or in combination. Withdrawal of these grounds of rejection is respectfully requested.

In view of the foregoing, Applicant submits that the application is in condition for allowance. Notice to that effect is requested.

Respectfully submitted,

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